



## Stairs – One and Two Family Home

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Stairs are a major source of deaths and serious injuries in the home. Studies have estimated that stair riser/tread dimensions are factors in nearly 50 % of all stair-related injuries in the home.

Proper layout and construction of stairs is one of the most complicated building tasks you can undertake. This information sheet was written to inform you of the *code requirements* of stairs, not how to properly construct them. There are many good books and other resources on proper stair layout available at the library and at home improvement stores.

### Stair construction

Stairs consist of stringers, treads, risers, and railings. The stringers are made from 2 x 12 material, are installed at a diagonal, and have vertical and horizontal notches cut out on which to fasten the treads and risers.

You can buy pre-cut stringers at a home improvement store, but they probably won't fit the exact dimensions of your particular situation.

### Code requirements

- Stairs must be at least 36" wide.
- Handrails can project into that 36" by 4-1/2" on each side.
- Stairs must have headroom clearance of at least 6'-4".
- Risers cannot be higher than 8", and no less than 4".
- Treads must be at least 9" deep.
- Within a flight of stairs, treads and risers cannot vary by more than 3/16".
- Guardrails are always horizontal and are placed around stair openings or around the edges of a porch or deck. Guardrails must be at least 36" high.

- Handrails are the railings that go down the stairs. Handrails can be between 30" and 38" high. There are very strict code requirements for handrail design and installation.
- There can be no openings anywhere in the railing system larger than 4".
- Landings usually must be provided at the top and bottom of every flight of stairs, must be as wide as the stairs and at least 3' deep.

There are additional code requirements for winding or curved stairs, spiral stairs, ladder-type exits, basement window exits, and curved or irregular landings. Please refer to the State of Wisconsin Uniform Dwelling Code for the requirements for these types of special stair situations.

### Submitting plans

You do not need to submit plans to repair or replace a porch or a deck unless you are increasing the size. In that case, the plan examiner will need to see a site plan or survey of your property to determine if the increase conforms to the setback requirements of the City of Milwaukee zoning code.

After you get your permit, contact your building inspector if you need some assistance in properly laying out your stairs.

(See our other information sheet on [decks](#))